Fatigue is common among people with brain tumors and substantially affects their quality of life. People with malignant tumors and those with benign tumors experience fatigue, which can be defined as an overwhelming feeling of tiredness that is not relieved by sleep and interferes with usual functioning. Individuals describe fatigue as weakness, exhaustion, sleepiness, drowsiness, confusion, and lack of energy. The level of fatigue varies from person to person. Monitoring and reducing factors that trigger fatigue can help to cope with fatigue and improve quality of life.

What causes fatigue in people with brain tumors?
The exact cause of brain tumor fatigue is not well understood. Both the tumor and its treatment contribute to brain tumor fatigue. Some potential causes include treatment-related factors, cognitive changes, medications, other medical conditions, and psychosocial (or emotional) causes. Many of these factors are interrelated.

- **Treatment-related:** Surgery, radiation, and chemotherapy can all affect energy level. Surgery-related fatigue may occur for up to 1-2 years after most major surgeries, not just those involving the brain. Even when the tumor is removed, the “insult” caused by the abnormal growth may be slow to heal, and brain injury caused by the tumor and its treatment may be a factor. In addition, fatigue is frequently a side effect of radiation and patients often experience a delayed response that persists months after radiation is completed. Fatigue is also a common side effect of chemotherapy, and chemotherapy can induce anemia, which is a known cause of fatigue. In many cancers, chemotherapy is also linked to a loss of mental sharpness known as “chemo-brain.”

- **Cognitive:** Short-term memory loss, overstimulation, and attention impairment can all contribute to fatigue. Many people experience something called “attentional fatigue,” which refers to the tiredness that comes from having to think about behaviors that used to be easy. Routine tasks may require greater concentration and effort, and may even need to be relearned. Some patients struggle with slowed thinking, mental exhaustion, or difficulty focusing on several things at once.

- **Medication:** Medications commonly used by people with brain tumors can contribute to fatigue. For instance, seizure medications (antiepileptic drugs) are associated with fatigue. Decreasing the dose of steroid medication used to control swelling can lead to corticosteroid withdrawal, which also causes fatigue. The cumulative effect of antiepileptic drugs, chemotherapy, and other drug interactions is believed to affect energy levels.

- **Other medical conditions:** Generalized and complex partial seizures, low hormone levels, poor nutrition, dehydration, pain, one-sided hearing or vision loss, and problems with dizziness and balance are among the range of medical conditions patients may experience which can cause fatigue.

- **Psychosocial:** Depression, anxiety, stress, and other types of emotional distress affect patients’ energy levels. Fatigue and quality of life are closely connected, and factors that affect quality of life, such as coping with cognitive changes and sleep disturbances, contribute to fatigue. Another factor is the tendency for people to overexert themselves on days when they feel well. The sense of urgency to get things done may lead people to push themselves too much.
What strategies can help manage fatigue?

Fatigue can be managed to some degree by identifying fatigue triggers and adopting strategies to reduce them. Different approaches work differently for different people, so find out which strategies work for you. If you continue to have problems with fatigue, do not hesitate to consult with your physician or nurse.

**Identify treatable causes.** Some of the factors that contribute to fatigue are treatable. Discuss your fatigue with your doctor and request a thorough evaluation to investigate what may be contributing. An evaluation of your medications and drug interactions may help identify medication-related sources of fatigue. Anemia, pain, and sleep disturbances may be improved with medication. Also, a very small number of studies suggest the psychostimulant drugs methylphenidate and modafinal may help reduce fatigue. In addition, a neuropsychological evaluation can help identify cognitive changes, pinpointing those most likely to respond to rehabilitation. The testing can also detect depression and anxiety, both of which respond to treatment.

**Identify patterns in your energy levels.** Keep a record of your energy levels and what seems to trigger fatigue. Learn the times of the day when you seem to have more energy and schedule activities accordingly. Pay attention to early signs of fatigue in yourself and stop activity before becoming overtired. Possible signals of mental fatigue include growing levels of disorganization, frustration, restlessness, irritability, tearfulness, slowed thinking, distractibility, worsening memory, or difficulty maintaining focus or concentration.

**Adjust your environment and activities.** Look for ways to simplify the environment around you. Limit distractions and reduce competing demands. Recognize that activities that used to be relaxing (socializing with friends, going out to eat, etc.) may now cause fatigue. Try shorter or lighter versions of activities you enjoy or activities that are less strenuous (like reading or listening to music).

**Practice good daily habits.** Drink plenty of fluids and eat as well as you can. Talk with your doctor or another health care professional about your nutrition and try to get enough calories and protein in your diet. Develop consistent sleep habits, like going to bed and getting up at the same time every day. Take short walks or exercise if possible (check with your physician first). Practice stress management and relaxation techniques, such as deep breathing and meditation.

**Practice energy conservation.** Pace yourself and prioritize your activities to save energy for the most important things. Schedule rest into your daily routine. Rather than planning one long rest period, take short naps or breaks. Allow yourself recovery time between activities and events to “recharge your battery.” Before beginning an activity, take a moment to focus on the task, get organized, and plan out the steps. When others offer to help, let them. Make a list of chores, errands and other tasks that they could help with.

**Develop realistic expectations.** Avoid competing with the person you once were or holding yourself to former standards. You now operate without the energy reserves you once had. Resist the pull to keep running on empty. Give yourself permission to take a rest or a break without feeling that you are “giving in to the tumor.” Long-term survivors who feel they have conquered fatigue say they did so by redefining “normal” and accepting the person they are now.

For more information and how to reach us:

- Visit our website [www.braintumor.org](http://www.braintumor.org)
- Email us at [info@braintumor.org](mailto:info@braintumor.org)
- Call Patient Services at 800 934 2873
- Join our online community [http://My.BrainTumorCommunity.org](http://My.BrainTumorCommunity.org)

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About National Brain Tumor Society

Today there are over 600,000 people in the US living with the devastating diagnosis of a brain tumor and NBTS is fiercely committed to improving the lives of all those affected. Learn more about our comprehensive patient, family, and caregiver services, our targeted adult and pediatric brain tumor research programs, and our latest advocacy efforts at www.braintumor.org.